CALCULATION, REPRESENTATION, AND MAINTANENCE OF SHARING-INFORMATION IN MESH NETWORKS

ABSTRACT OF THE DISCLOSURE

5   A method for representing, in a network data structure, a minimum amount of protection bandwidth required to be reserved on each link in a mesh network, to restore service upon failure of another node or link in the network. The method includes (1) receiving a request for a new service in the network, wherein the new service is represented by a service data structure having an identification of each link and transit node in a primary

10   path for the new service, (2) determining, using the network and service data structures, whether the new service requires additional protection bandwidth to be reserved on any link in the network, and (3) updating the network data structure if any additional protection bandwidth is determined to be needed. In one implementation the network and service data structures are vectors and the steps of determining and updating involve vector operations

15   between these structures.